

IPSWICH RIVER WATERSHED GIS DEVELOPMENT

Ipswich, MA

THE IPSWICH RIVER WATERSHED GIS PROJECT WAS FUNDED THROUGH THE MASSACHUSETTS Watershed Initiative by the Executive Office of Environmental Affairs (EOEA). The EOEA wanted to provide a system that would allow local Conservation Commissions to map and catalog sensitive and restricted wetland areas and to track the status of Notice of Intent applications.

A screenshot of a Microsoft Access database window titled "Wetland Tracking Database". The window has a menu bar with "File", "Edit", "View", "Tools", "Format", "Records", and "Database". Below the menu bar are buttons for "FIND:", "GO TO:", and "PRINT:". The "GO TO:" button is highlighted. The main area contains several form fields for data entry, including "Applicant First Name", "Applicant Last Name", "Applicant Company", "Representative Name", "Representative Company", "Owner Name", "Owner Company", "Project Address", "Project Type", "Order of Conditions", "Order of Conditions Date", "Order of Conditions Remarks", "Order of Conditions Status", "Order of Conditions Date", "Order of Conditions Remarks", "Order of Conditions Status", "Order of Conditions Date", "Order of Conditions Remarks", "Order of Conditions Status", "Order of Conditions Date", "Order of Conditions Remarks", "Order of Conditions Status".

Microsoft Access database allows you to file a Notice of Intent, Order of Condition, or Certificate of Compliance.

The system was designed to permit local Conservation Commissions to enter all information pertaining to Notices of Intent, Orders of Conditions, and Certificates of Compliance into the GIS / database system and track their status. The Conservation Commissions are then able to easily identify the location of each project with respect to sensitive and restricted areas; quickly identify the status of individual projects in the permitting process; query the database to allow users to call up all projects within certain areas or which need further review based on a given time frame; and look at the Ipswich River Watershed in a holistic manner across town boundaries.

The goal of this project was to provide a tool to the 23 local Conservation Commissions that would permit them to do their job more effectively and to give the commissions a better understanding of the relationships between proposed and permitted projects and their impacts to resource areas.

Due to the wide variation in computer resources available to the Conservation Commissions in the Ipswich River Watershed, the tracking system was developed as two separate components. The first component is a Microsoft Access database that allows for the input, retrieval and tracking of all information relating to the filing of a Notice of Intent and the subsequent issuance of an Order of Condition and Certificate of Compliance. The second component is an ArcView GIS project that has been customized using the MassGIS data viewer project to present and track data spatially. The user is able to take full advantage of the extensive GIS data available in Massachusetts such as aerial photographs, USGS quad sheets, location of wetland areas, streams, ponds, etc. The ArcView GIS project allows the user to locate, view, and track projects spatially. Especially important is the ability to determine the relative location of projects to sensitive environmental resources in both a qualitative and quantitative manner, as required.

By separating the project into two components Conservation Commissions have the option of using either just the database or the database and GIS project together. Most of the goals and functionality of the tracking system can be met using just the database alone for those Commissions that either do not have the computer resources to run a GIS application or the time and interest to learn how to utilize GIS.

Once the database was constructed, each of the local conservation commissions and members of the local watershed groups were provided with training opportunities. A total of six regional training sessions were held. A detailed written user and technical manual accompanied each copy of the GIS project.



The ArcView GIS interface.

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